

**DOC and TDN:** DOC and TDN concentrations were determined in the Dennis Hansell lab at the University of Miami. Water samples were taken directly from Niskin bottles. Samples from the upper 250 m were gravity filtered in-line using polycarbonate filter holders and precombusted GF/F filters. At greater depths the sample water was collected unfiltered. All waters were collected into acid leached, 60-mL polycarbonate bottles and stored frozen at  $-20^{\circ}\text{C}$  in volatile organic-free freezers until analysis at shore-based laboratories. DOC was measured by high temperature combustion (HTC) using a Shimadzu TOC-L with auto injection (CV of 1.5-2.5%), following the method described in Dickson et al. (2007). TOC was combusted to  $\text{CO}_2$  upon injection and the resulting gas stream scrubbed of water vapor and halides and the magnitude of  $\text{CO}_2$  detected with a non-dispersive infrared detector. TDN was determined by HTC where TDN was converted to nitric oxide (NO) gas, which then reacted with ozone producing an excited chemiluminescence  $\text{NO}_2$  species. The fluorescence signal was then detected with a Shimadzu TNM-1 chemiluminescence detector. DON is calculated as the difference between TDN concentrations and the sum of dissolved, combined inorganic (nutrient) nitrogen. Four point standard curves using KHP for C and  $\text{KNO}_3$  for N were run daily to calibrate the response of the high temperature combustion systems. Both measurements were quality controlled using consensus reference materials (CRMs) distributed to the international community (Hansell, 2005). The CRMs were analyzed at regular intervals during each analytical day. Low C (and N) reference water was employed to determine system blanks.

## References

- Dickson, A.G., Sabine, C.L. and Christian, J.R. (Eds.) 2007. Guide to best practices for ocean  $\text{CO}_2$  measurements. PICES Special Publication 3, 191 pp.
- Hansell, D.A. 2005. Dissolved organic carbon reference material program. *EOS* 86(35): 318.